REMARKS

Claims 1-24 are presented for examination. Favorable reconsideration of claims 1-24 is earnestly solicited in view of the instant remarks.

Specification

The Examiner objects to the Abstract of the disclosure. Applicants respectfully traverse.

In accordance with the Examiner's suggestion, the Abstract has been amended to delete the redundancy cited by the Examiner.

Objections to the Drawings

The Examiner objects to the drawing figure becuause the elements indicated by reference numerals 1, 2, 3, and 5 should be designated by text labels.

Applicants have provided a proposed drawing correction in which the elements indicated by those reference numerals now include text labels.

Rejections Under 35 U.S.C. § 102

Claims 1-18 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Al-Dabbagh (U.S. Patent No. 5,602,709).

The Examiner states that Al-Dabbagh discloses a system 34 for detecting arc faults in an electrical circuit.

Referring to column 15, lines 2-5, Al-Dabbagh obtains data as either individual weighted frequency component signals, or as a weighted sum of components. The weighted sum method is described beginning at line 48 of column 14. Therefore, Al-Dabbagh operates in the frequency domain. Specifically, the data obtained by Al-Dabbagh are point values and do not describe a temporal model or template of arc characteristics.

By contrast, the invention recited in amended claim 1 recites "a store of a plurality of temporal models gathered over time periods of electrical events associated with arc faults...." Therefore, the system recited in claim 1 analyzes electrical signals associated with electrical events in a temporal fashion. This method of analysis stands in contrast to the method of Al-Dabbagh, in which frequency components or weighted sums of frequency components are compared at a point values. The analysis of electrical events over time as recited in claim 1 allows for a more accurate assessment of the status of electrical signals.

Claim 8 recites a system for detecting arc faults comprising "a store of a plurality of temporal models gathered over time periods of electrical events associated with arc faults and events not associated with arc faults...."

Claim 9 recites a system for detecting arc faults comprising "a store of a plurality of temporal models gathered over time periods of electrical events associated with arc faults and of events not associated with arc faults...."

Claim 10 recites a method of detecting an arc fault comprising comparing processed signals with "a plurality of stored temporal models gathered over time periods representative of both arc faults and of events not associated with arc faults...."

Claim 18 recites a method of detecting an arc faulting in a circuit comprising comparing processed signals with "a plurality of stored temporal models gathered over time periods representative of both arc faults and of events not associated with arc faults...."

Therefore, independent claims 8, 9, 10, and 18 define over Al-Dabbagh.

Claim 7 recites a system for detecting arc faults in electrical circuits including an artificial neural net programmed to recognize features of different arcs. Claim 16 recites a method of detecting an arc fault comprising the step of supplying a processed signal to "an artificial neural net programmed to recognize features of different arcs...'

In the rejection, the Examiner states that Al-Dabbagh discloses a neural net and refers to lines 6-12 of column 20. The Examiner states that the artificial neural net corresponds to the microprocessor 30 in Figure 5 of the Al-Dabbagh patent.

Applicants assert that the microprocessor 30 of Al-Dabbagh is not a neural net. There is no disclosure that the microprocessor 30 functions in any of the special capacities of a neural net. For example, microprocessor 30 is not described as adapting its functionality or recognizing arc faults as data is gathered.

Because Al-Dabbagh fails to disclose an artificial neural net, the patent cannot anticipate claims 7 or 16. Accordingly, Applicants request reconsideration and withdrawal of the rejection.

Conclusion

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

If a fee is due with this response, please charge our Deposit Account No. 22-0185, under Order No. 20272-00701-US from which the undersigned is authorized to draw.

Dated: September 23, 2003   Respectfully submitted,

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ANNOTATED SHEET SHOWING CHANGES